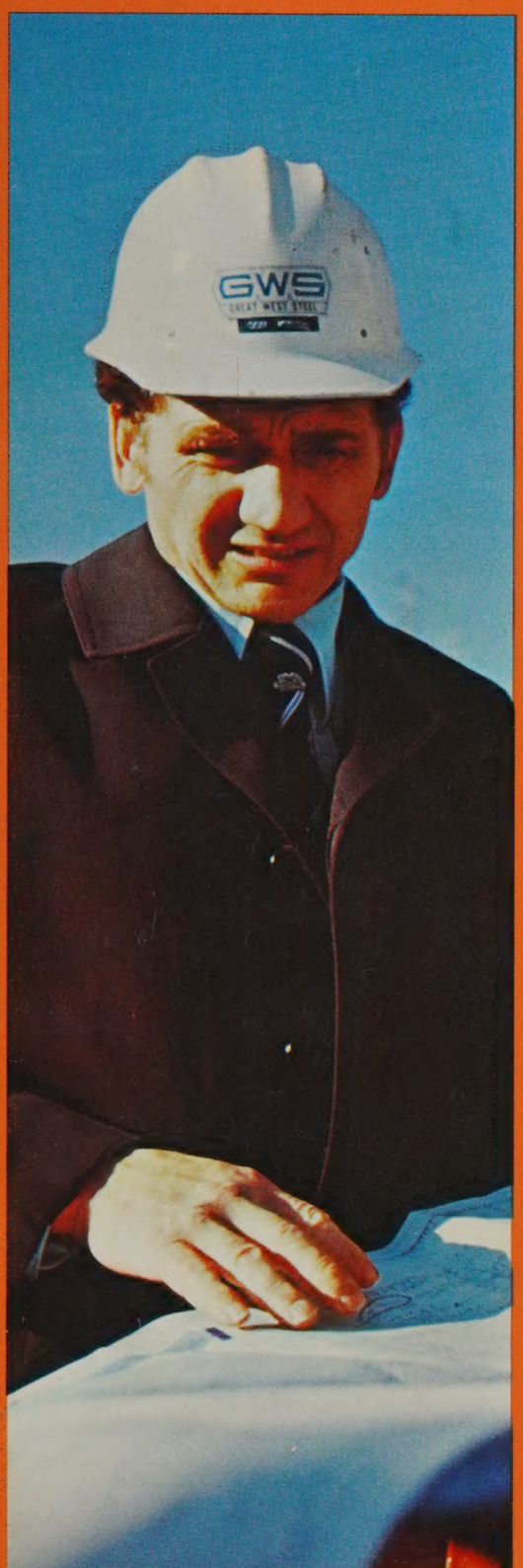
GREAT WEST STEEL INDUSTRIES LTD./ANNUAL REPORT 1973



GREAT WEST STEEL INDUSTRIES LTD.

DIRECTORS

Kenneth G. Heffel, Vancouver
George B. Bogdanow, Vancouver
Bernhard L. Diefenbach, Edmonton
K. F. Gunter Diefenbach, Edmonton
Gerald Dobbs, Toronto
Michael L. Galper, Toronto
Ian L. Hamilton, Vancouver
D. Scott Kennedy, Vancouver
Michael P. Pick, Toronto
Alan D. Turnbull, Vancouver
J. Leslie Bodie, Winnipeg

OFFICERS

Kenneth G. Heffel, *President*
George B. Bogdanow, *Vice President Finance and Administration*
Ian L. Hamilton, *Vice President Operations*
Raymond D. Lucas, *Vice President Corporate Development*
David W. Nairne, *Vice President Construction*
Gerard Norton, *Vice President Resource Engineering*
Alan D. Turnbull, *Vice President Technical Services*
Bernhard L. Diefenbach, *Vice President Prairie Region*
Gerald Dobbs, *Vice President Eastern Region*
D. Scott Kennedy, *Vice President Pacific Region*
K. F. Gunter Diefenbach, *Vice President*
D. Barry Milton, *Treasurer*
William E. Allen, *Secretary*

STOCK LISTINGS

Toronto, Montreal and Vancouver Stock Exchanges

BANKERS

The Toronto-Dominion Bank

EXECUTIVE OFFICES

1060 - One Bentall Centre,
Vancouver, B.C.

REGISTERED OFFICE

7th Floor, 900 West Hastings Street,
Vancouver, B.C.

AUDITORS

Coopers & Lybrand,
Chartered Accountants

TRANSFER AGENTS & REGISTRARS

For common shares and share purchase warrants:

The Canada Trust Company, Vancouver, Toronto, Edmonton, Regina, Winnipeg, Montreal

For debentures:

The Royal Trust Company, Vancouver, Edmonton, Toronto, Montreal

SUBSIDIARIES

Atlas Construction & Crane Service Ltd., Edmonton and Calgary
Birtley Engineering Limited, Chesterfield and Glasgow, U.K.
Birtley Engineering (Canada) Ltd., Calgary
Birtley Engineering Inc., Denver, Salt Lake City, Detroit
Great West Steel Industries (Alta) Ltd., Edmonton, Calgary and New Westminster
Great West Steel Industries (Sask.) Ltd., Saskatoon
Great West Steel Industries Inc., Seattle, San Francisco and Los Angeles
International Brick & Tile Ltd., Edmonton
Multiform Consultants Ltd., Vancouver
Pine Pass Development Ltd., Vancouver
Taskmaster Computing Systems Ltd., Edmonton
Wallclad Products Ltd., Richmond

Highlights of Operations

*In thousands of dollars except as indicated**

GREAT WEST STEEL INDUSTRIES LTD. is a Canadian owned group of interrelated manufacturing and engineering companies with a strong research and development program.

Its main product is open web steel joists manufactured from components produced on its own forming mills. This product is a successful substitute for scarce structural steel.

The Company also manufactures minerals handling equipment, while its Resource Engineering Division is an acknowledged expert in coal preparation plant design.

The Company's plant facilities and engineering expertise are strategically located to participate in energy related projects, particularly tarsands development and thermal coal mining.

MAIN PRODUCTS AND SERVICES

Designers, Engineers and Manufacturers

Ceramic Bricks and Paving Tiles
Coal Plant and Foundry Consumables
Coal Preparation Plants
Coal Engineering and Testing
Construction Management
Crane Service and Pile Driving
Materials Handling Systems
Mining and Minerals Processing Equipment
Refuse Treatment Plants
Sampling Equipment
Steel Joists
Steel Plate Work
Steel Sandwich Wallpanels
Structural Steel
Uniplex Modular Buildings
Vibratory Equipment and Conveyors

	1973	1972
Net Working Capital†	$ 5,934	$ 7,285
Net Fixed Assets	10,891	9,679
Other Assets	1,730	728
Total Net Assets	18,555	17,692
Represented by:		
Funded Debt	9,296	9,122
Deferred Income Taxes	2,353	2,010
Minority Interest	49	49
Shareholders' Equity	6,857	6,511
	18,555	17,692
Fixed Assets of Newly Acquired Subsidiary Companies	—	812
Capital Expenditures on Fixed Assets	2,703	2,595
Total Capital Expenditures	2,703	3,407
Total Payroll and Benefits	16,220	11,169
Number of Employees at Year End*	1,431	1,218
Dollars of Investment in Plant per Employee*	10,021	9,653
Sales	46,857	31,341
Earnings from Operations before Depreciation, Amortization, Interest and Income Taxes	2,769	2,307
Net Earnings:		
Before Extraordinary Item	533	688
After Extraordinary Item	345	688
Net Earnings as % of Sales:		
Before Extraordinary Item	1.1%	2.2%
After Extraordinary Item	.7%	2.2%
Net Earnings per Share:**		
Before Extraordinary Item	31¢	40¢
After Extraordinary Item	20¢	40¢
Cash Flow per Share:**†		
Before Extraordinary Item	89¢	84¢
After Extraordinary Item	68¢	84¢

†Including current portion of Deferred Income Taxes.
***Based on 1,702,495 Common Shares outstanding at December 31, 1973.*

To the Shareholders and Employees

This, the third annual report of Great West Steel Industries Ltd., contains the Consolidated Financial Statements for the year ended December 31, 1973, together with the Auditors' Report thereon.

Sales in 1973 rose to $46,857,000 from $31,341,000 last year. Earnings from operations increased to $2,769,000 compared to $2,307,000. Net earnings of $533,000 before extraordinary item and $345,000 after extraordinary item declined from $688,000 in 1972. These figures represent increases of 50 percent and 20 percent and decreases of 23 percent and 50 percent respectively.

During 1973, Great West Steel Industries Ltd. encountered several delays as well as unforeseen increased costs with three of its development projects. Taken by itself, our ninth year of operations was disappointing. However, during the year a great deal was accomplished toward the achievement of our long term goals. While sales volume reflected success, short-run problems adversely affected net earnings, return on sales and return on average shareholders' equity. These short-run problems centered primarily around the start-up of two new operations—the Fontana, California joist plant, which represents an extension of an existing product line into a new market region, and, the Wallclad sandwich wall panel products plant which serves an existing market region with a new product line. The Toronto joist operation also was a problem area until June, 1973, when the physical move and consolidation of a two-plant operation into one modern facility was completed.

Details of these short-run problems encountered in 1973 are:

1. FONTANA, CALIFORNIA

As outlined in our 1972 report, the expansion of the Company's open web steel joist product into the western United States began in that year with an extensive feasibility study and evaluation. This work culminated with the establishment of a new manufacturing plant which commenced limited production in late February, 1973. This expansion into a sizable market resulted in many problems. Sales orders were initially hard to secure. The missionary marketing work required in explaining a relatively new product to architects, consulting engineers, developers, owners and contractors did not yield satisfactory results. Fixed plant equipment facilities, skilled labor, engineers and draftsmen were, therefore, held to low levels while awaiting sales. Subsequently, with the marketing organization firmly established, these efforts suddenly generated heavy order backlogs for production during the period June to October, 1973. Unfortunately this demand was beyond the organization's then available production capability. In an effort to cope with this situation, additional capital expenditures were made, causing severe disruption to the original moderate equipment facilities. Inadequate product quality, late product deliveries and poor price levels on early sales resulted in substantial losses on start-up. In such circumstances, corporate management decided in early October 1973 to curtail activity to a level that was manageable within the capability of this operation and to allow time for all operating levels to reach maturity. Full commercial production at this reduced activity level was achieved by November 1, 1973. Time was needed to build an organization of sufficient depth and resiliency to take advantage of California's vast market potential for roof and floor systems. Therefore, because of sales volume curtailment, Fontana is not expected to contribute sizable earnings in 1974.

Kenneth G. Heffel

2. TORONTO

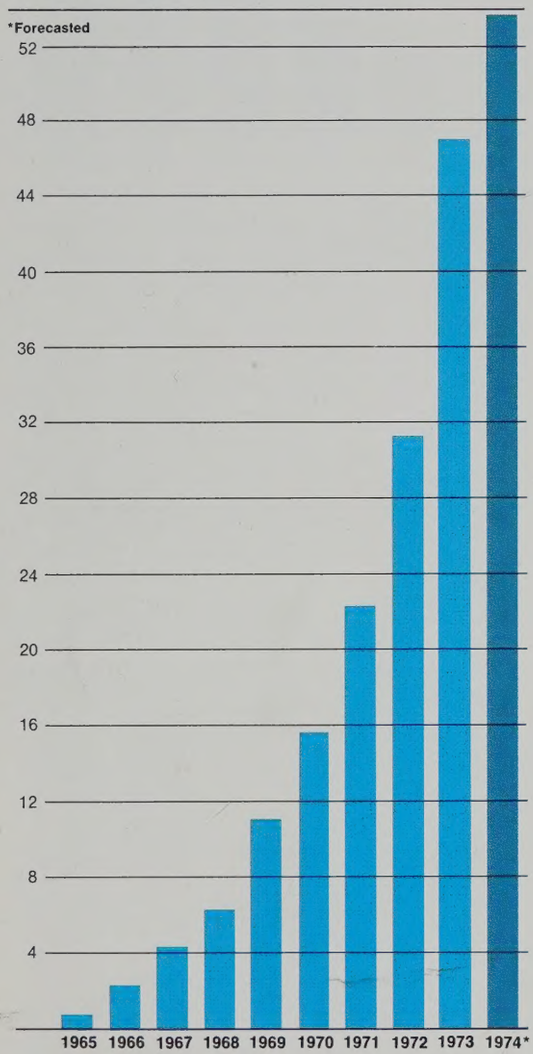
Toronto operations continued to encounter low margins during the first half of 1973 due to the physical consolidation of two plants into a single modern facility. This move took place in the spring and was completed by the end of June, 1973. The last half of 1973 saw progressive improvements in both operating and net margins so sizable that the costs of the move were fully absorbed and the operation at year end showed a profit. This trend has continued into 1974 and we expect the first quarter results of this operation to show significant gains in both operating and net margins. Toronto earnings for the last eight months are sufficient to justify the original move into eastern Canada and confirm that the new operation will contribute meaningfully to the Company's future earnings performance.

3. WALLCLAD

Losses on start-up in this operation, all of which were expensed in 1973, essentially resulted from product difficulties. These difficulties are now approaching resolution, although additional research and development remains to be done. This work will continue during 1974 to confirm product viability and efficiency. The potential market for Wallclad products is substantial, particularly in northern Canada and Alaska.

The future construction market looks strong in the industrial, commercial and institutional sectors of the industry. In the industrial sector, exceptionally large expenditures are either committed or forecasted for western and northern Canada, as well as in Alaska and the western United States. Much of these expenditures are for energy related projects, particularly tarsands development, thermal coal mining and pipeline construction. The Company's plant facilities and engineering expertise are strategically located to take advantage of this expected increase in product and service demand in the coming years.

SALES VOLUME *(In Millions of Dollars)*



Good progress was made in 1973 at International Brick and Tile Limited. Plant construction, equipment installation and subsequent testing was carried out for the manufacture of flyash-based quarry tiles. Quarry tile is used in the construction industry for flooring of shopping centres, schools, as well as institutional and commercial buildings. Plant start-up took place in late 1973. This highly sophisticated operation will soon be producing at an annual rate of two million square feet for the western Canadian market, where a strong product demand exists. An active research and development effort continues for other flyash products such as building blocks, refractory brick and other ceramic construction materials. Preliminary investigation is also underway into the licensing of new tile operations at locations where the Company may not wish to have fixed investment.

Our Company's long term growth objectives are established within its management philosophy of directing all corporate resources to the development of highly engineered products or services related to the construction and natural resource industries with emphasis on products or services of a proprietary nature. These objectives on a trend line basis for the next five years are a 15 percent compounded sales growth; a 20 percent growth in net earnings; an improving rate of return on sales to a target of 5 percent at the end of the period; and a revised return on average equity over the period of 15 percent.

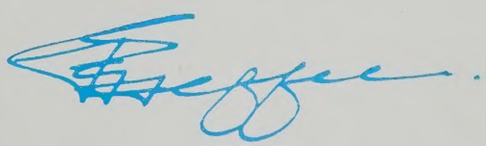
Problems encountered in 1973 have now been largely overcome and our research and development projects are beginning to yield successes. We therefore believe that a resumption of earnings growth in 1974 is both attainable and realistic. For 1974 and 1975 no new acquisitions are planned and no major commitments of either a product or market expansion nature are expected. Rather, we will concentrate on existing products and market regions. This policy should not inhibit attainment of our growth objectives since capital expenditures and acquisitions made during the last two years should provide ample production capacity and market exposure. The increased demand for company products and services, particularly within the natural resource industries, should further enhance performance in the foreseeable future.

The theme of our 1973 Annual Report is research and development. To assure long term growth and prosperity, a continuing program directed towards new and improved products and technology is essential as well as the development of new and enlarged markets. To support these programs, short term earnings may be sacrificed to stimulate longer term prosperity. In theory these investments in the future should be planned in such a manner that their cost is absorbed over an extended period and thereby does not inhibit year to year growth in net earnings. However, it would be unrealistic to expect that successful timing of each project or the cost of research or development will always be on target since by its very nature, research and development deals with uncertain factors.

We were saddened by the loss of a long and valued friend when Mr. Harry A. Wyss, Vice-President and General Manager of our Calgary operations passed away suddenly on November 21, 1973. His managerial ability and fellowship will be missed and to his family we offer our condolences.

As in the past, all manufacturing operations and offices enjoyed good labor relations during 1973. The sales growth during the year was made possible by the loyal support and effort of our employees at all levels and to them we extend our sincere appreciation.

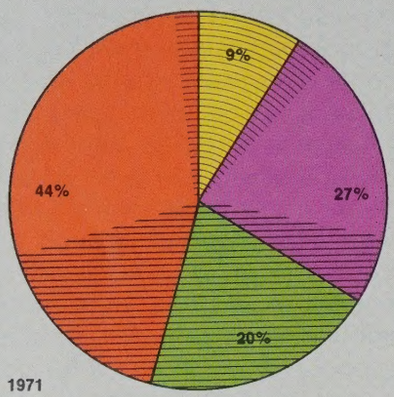
On behalf of the Board of Directors,



K. G. Heffel,
Chairman and President.

Vancouver, B.C.
March 14, 1974.

SALES PRODUCT MIX



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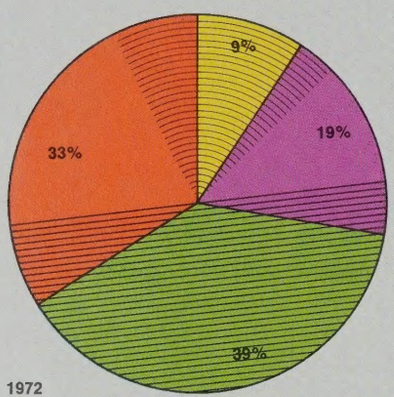

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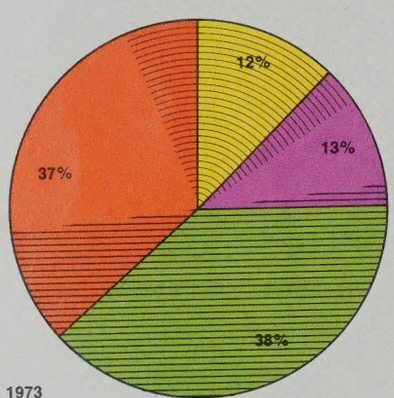
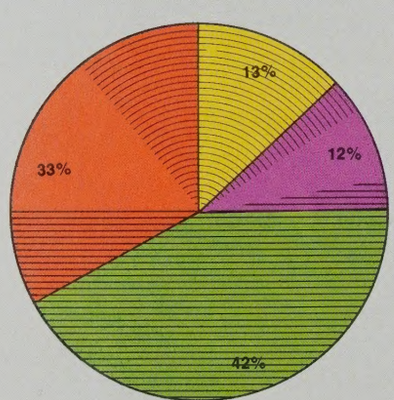
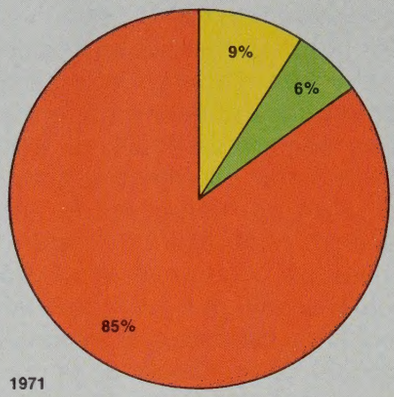


1973



1974 FORECASTED

MARKET



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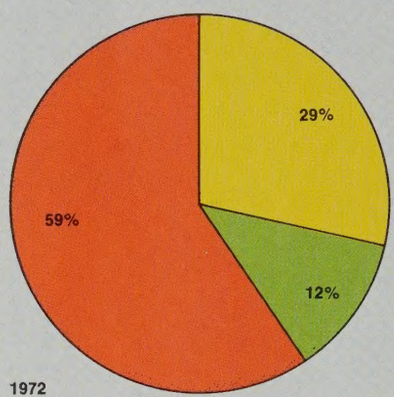
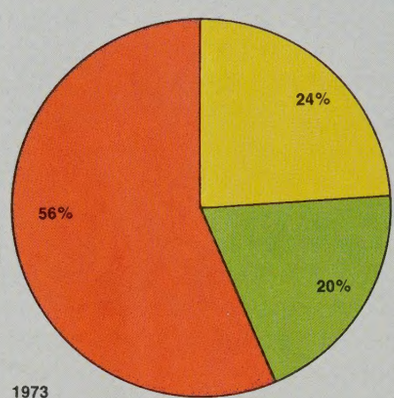
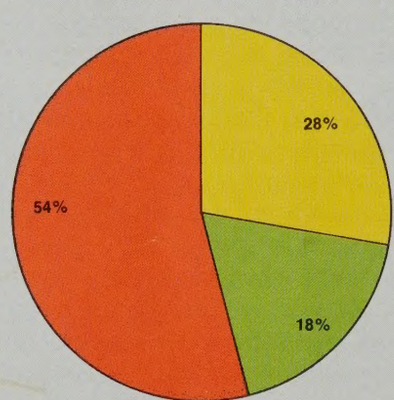


1972



1973



1974 FORECASTED

Steel
Joists
Construction
Resource Engineering

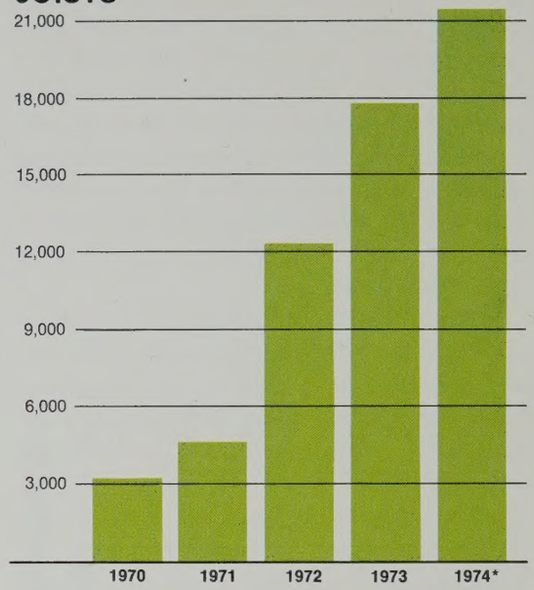
Resource Industry Generated Sales
Joist Generated Sales

Western Canada Sales
Eastern Canada Sales
Sales Abroad

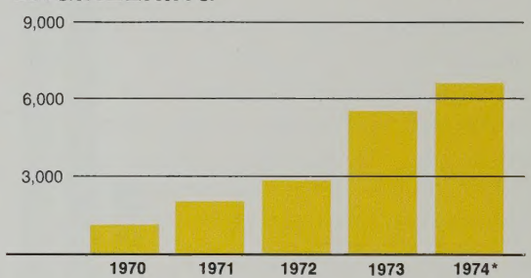
SALES VOLUME BY PRODUCT

IN THOUSANDS OF DOLLARS

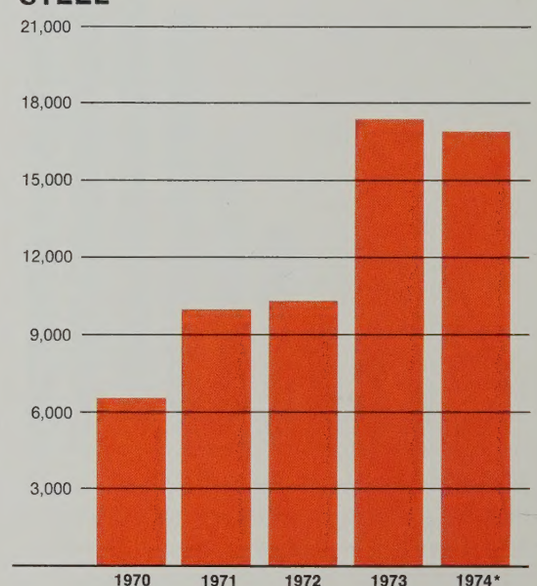
JOISTS



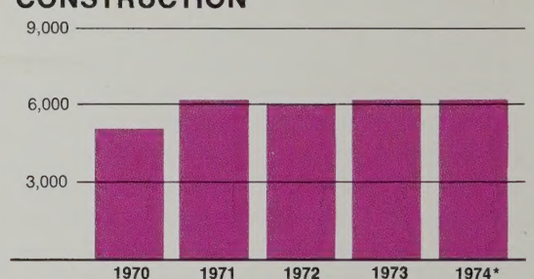
RESOURCE ENGINEERING



STEEL



CONSTRUCTION



*Forecasted

Manufacturing Division–Bulk Handling Equipment

From the date of incorporation, Great West Steel Industries has played a significant role as a qualified and respected supplier of manufactured goods and services to northern Alberta tarsands developments. This included work on the original conveyor system structures, the main Service Building and the installation of mechanical equipment for Great Canadian Oil Sands Ltd. at Fort McMurray, Alberta. The Company has more recently manufactured and installed heavy fabricated steel structures and made major modifications to conveyor equipment for Great Canadian Oil Sands Ltd. It has also assembled a large Bucyrus Erie dragline for Syncrude of Canada Ltd. on the Athabasca Tarsands site in northern Alberta.

The world energy crisis and increased prices for crude oil should result in continuing tarsands development in northern Alberta over the next 10 to 20 years. To allow the Company to play an increasing role in future projects, a new company, GWS-Krupp-Orenstein & Koppel Ltd. will be incorporated. It will be jointly owned by Great West Steel Industries Ltd., Fried. Krupp GmbH Krupp Industrie– und Stahlbau of Rheinhausen, West Germany and O & K Orenstein and Koppel A.G. of Dortmund, West Germany. This new company will be the vehicle to bid for the engineering, manufacture and installation of mining equipment for tarsands projects. Krupp and O & K are the world's leading manufacturers of bucketwheel excavators, stackers and reclaimers. If a bid is successful, it is proposed to manufacture part of the equipment at the Company's Edmonton plants and to install such equipment on-site utilizing its field crews and crane services.

Above: GWS Edmonton shop and field crews assembled and erected this large Bucyrus Erie Dragline for use by Syncrude Canada Ltd. on the Athabasca Tarsands site in Northern Alberta.

Below: The proposed new company, GWS-Krupp-Orenstein & Koppel Ltd., will bid for the engineering, manufacture and field assembly of large bucketwheel excavators, similar to the machine shown in this picture and other mining equipment for tarsands projects.

Photo courtesy of O & K Orenstein & Koppel AG, Lübeck, West Germany.

Manufacturing Division–Joists

While the existing steel shortages have caused problems, we are pleased to report that our principal product, open web steel joists and trusses, have been affected to a much lesser extent than the heavier rolled structural members used by structural steel fabricators.

Our basic supply of proprietary chord sections and coiled strip has been well maintained. This has led to an interesting set of circumstances where on numerous occasions we redesigned building steelwork away from the heavy, difficult to obtain, rolled beams. In their place we have supplied much lighter trusses which have been manufactured from our basic joist components and hollow steel sections formed from strip steel to replace scarce wide flange columns. This concept is not new; but current supply conditions make this approach even more attractive than in the past.

The results have been very promising to the extent that at the present time we have a standard truss range under investigation. With the help of JOISYS, our computerized engineering program, this will be automated for easy usage in all of our plants. The truss replacement of beams and our "two way" joist system enables us to provide fast delivery as we are much less dependent on steel mill rolling schedules than traditional beam and column steel fabrication.

We see the current steel supply situation continuing for some time, thereby providing a good opportunity for our joist systems to capture an even larger segment of the construction market.

Concurrent with these developments, the severe shortages of the more conventional hot rolled products is increasing the demand for our cold formed products and we have increased our production significantly. In particular our cold formed angles have met with good success. These are

Above: The Edmonton plant fabricated and supplied open web steel joists and the steel framework for the Explorer Hotel at Yellowknife, N.W.T. Atlas Construction and Crane Service erected the steel.

Right: GWS open web steel joists, mass produced in our plants, are used extensively as floor and roof supports in warehouses, schools, apartment buildings and shopping centres.

produced in various sizes and lengths for sale to other fabricators.

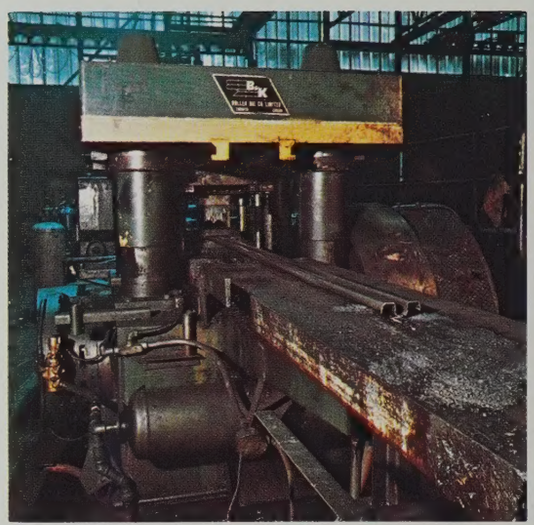
Extensive research and testing led to major changes in our joists in eastern Canada and in California during 1973. These locations use cold formed chord sections, where basic hot rolled strip is formed in our own plants to produce the total range of chords. The eastern Canadian chord, formed in our Toronto plant, is now produced in two basic size ranges with a total of seventeen sections.

During 1973, the decision was made to produce our own cold formed chords in Fontana, California. In the early stages these were manufactured for us by others in the area in basic stock lengths, using our rolls on their machines. Stock lengths lead to waste and negate one of the advantages of cold forming the chords ourselves to exact lengths to suit each contract requirement. Inventory levels and job lead time are also improved.

In 1973 our joist products met with continued acceptance and increased usage from Newfoundland to Alaska and from California to the Canadian Arctic.

Joist related products also met with increased success in such diverse industries and locations as off shore drilling rigs, swimming pools, jack frames for the Montreal Olympic site, refinery pipe supports and several other interesting uses. This stems from our efforts to increase their usage in non-conventional areas and applications.

GWS designed joist chords come off the cold forming line cut to exact length for contract requirements.



Mass production of joist components prior to final assembly leads to maximum efficiencies.

Manufacturing Division–Wallclad

We are continuing our development efforts along with product improvement and research.

Last year several pilot marketing installations were completed in B.C. and in the far north. Experience gained with these, coupled with our extensive research work, has resulted in answers to some of our problems.

Major production difficulties, since resolved, led to a decision in the later part of last year to temporarily suspend manufacture of the modular sandwich panel. Other related products, however, were continued. Another reason for the suspension was an apparent problem of secure supply of some of the components, mainly those derived from the petrochemical industry and this was caused by initial over reaction to the oil shortage. We are happy to report that these problems did not materialize and now appear unlikely to occur. However, during the crisis period, we successfully investigated other materials and other supply sources and are now, in this respect, much more independent.

We have now recommenced marketing and production with many of our difficulties behind us.

A new line of six standard Uniplex buildings ranging in size from 7′ x 12′ to 20′ x 42′ was established incorporating many of the above advancements. These are small shelter type structures with a wide range of uses in many industries and locations, particularly in remote areas and cold climates where alternative structures are extremely costly due to distance and availability of trades. These buildings utilize G.W.S. joists and hollow structural shapes for frames and Wallclad sandwich panels for walls and roofs.

For the convenience of our customers all technical data is now incorporated in a new catalogue, including complete loading charts for wind, snow and uniform loads.

Above: A good example of the versatility of steel sandwich panels is this architectural use of Wallclad's panels system in conjunction with other materials at the White Rock, B.C., Senior Secondary School.

Below: The construction of the gymnasium building is a typical example of the compatibility of GWS joists and Wallclad steel panels.

Manufacturing Division–International Brick and Tile

The main thrust of effort during 1973 was directed at completing installation and commissioning of the new floor tile plant at Wabamun, Alberta, although several other areas of secondary importance were also pursued or initiated during the year.

Foundation work, building erection and installation of key equipment at the tile plant were aided by an abnormally warm winter in Alberta, all of which was substantially completed by midsummer. De-bugging and testing on the equipment systems occupied the remainder of the year together with some minor equipment modifications which resulted from commercial scale trial runs made during the autumn. Concurrently a strong research program was carried out to finalize the composition of the basic ceramic tile body and develop a range of glazes suitable to it. The plant is satisfactory in terms of design and function and an early start on commercial scale production of quarry tile is anticipated in 1974.

Market conditions throughout Canada improved substantially during the year. Severe quarry tile shortages are being experienced as traditional European sources of supply are affected by upward currency revaluations, energy shortages and industrial difficulties in the United Kingdom.

Operations at the pilot brick plant were temporarily suspended towards the end of the year to concentrate resources and personnel on an early opening of the tile facility. Just over one million standard face bricks were produced at the pilot plant during the year. We are carrying out investigations into other possible products which would be suitable for full scale commercial manufacture. Products being looked into include ceramic block, glazed brick, antique brick and brick veneer.

Negotiations leading to a possible licensing agreement in Japan took place in the latter part of the year, and are continuing in 1974.

A refractory development program using local materials is in progress in co-operation with a major industrial consumer in the Edmonton area. Encouraging results have been obtained, and the test program is continuing.

In mid-year, IBT was retained by the Government of Nova Scotia to conduct a feasibility study into tile manufacture in that province. This investigation will be completed by mid 1974. A second feasibility study and test work was completed last year for a client in St. Louis, Missouri.

To supplement other income at low marginal cost, the Company is taking on selected feasibility assignments. This also permits us to monitor market developments and investment opportunities elsewhere.

The fully automated plant, including an 85 foot long roller hearth kiln, was installed and commissioned during the year and is designed for continuous production. From the mixing of the raw material feed through the pressing, drying and firing of the flyash tiles to the packaging of the finished product, the tiles remain untouched by human hands.

Sophisticated controls monitor the production equipment of I.B.T.'s new plant which manufactures paving and quarry tile from flyash.

Resource Engineering Division–Birtley Engineering

During the year the Company's Coal Science and Minerals Testing Division at Calgary continued the exploration and testing program on the 104 coal licenses in western Canada in which the Company's wholly owned subsidiary, Pine Pass Development Ltd. holds a 60% interest under a farm-out agreement from Pan Ocean Oil Limited. The results were encouraging. This coal property is of considerable interest in the short to medium term because of the known existence of high-grade coal in numerous locations and the proximity of the property to existing town, rail and highway facilities, which would lower capital cost requirements considerably.

For the coal testing stages of property evaluation and the feasibility study of current coal projects, the Coal Science and Mineral Testing Division has developed computer selection methods in optimising process design and computer programs for risk analysis and discounted cash flow return evaluation of complex coal properties and projects.

Our consulting and design study activity normally confined to coal process feasibility work has also been extended to the field of power station coal handling. The emphasis on this activity relates to the current world fuel shortage and the need to maximize exploitation of coal as an energy source in which context Birtley, as acknowledged experts, will be increasingly important.

Continuing marketing efforts in the United States resulted in the award of engineering contracts for coal handling facilities in the states of Texas and Utah. Birtley Engineering Inc. was also engaged in coal processing feasibility and preliminary engineering work for the testing, processing and transport of thermal coals from the western United States to utility companies in the eastern states. These contracts have necessitated the interim transfer of a number of our specialist designers from the United Kingdom to supplement the efforts of Birtley Engineering Inc. The Company's offices in Salt Lake City, Utah are presently being expanded to accommodate the need for greater engineering capacity.

Birtley activity in North America is focused on consulting and engineering design work including total package management rather than equipment manufacture and sales. Environmental concern in coal mining and processing has precipitated technological change which in turn has altered the nature of contract work in the industry. Our resource division planned for such changes by turning its efforts towards selected engineering projects such as the Fording Coal Plant, recognized in the industry as a well designed unit. We believe this method allows greater flexibility in process design and results in a higher degree of reliability than the traditional turnkey lump sum contract approach.

An exception to the general rule of concentrating on the engineering design aspects of the mineral resource industry is in the development of coal fines treatment equipment. In conjunction with Humboldt-Wedag, Birtley has installed commercial test units for double wobble froth flotation in western Canada. It is expected to show significant improvements in the fines treatment aspects of metallurgical coals.

The Company joint-venture, Speaker Motion Systems – Birtley Engineering

The coal wash facility of our Coal Science and Minerals Testing Division at Calgary, Alberta is continuing coal test work for numerous clients.

(Canada) Ltd., is continuing to make excellent progress with the engineering, construction and installation of a major automated post office parcel sorting system at the Gateway Regional Post Office at Mississauga, Ontario. The manufacturing and administrative backup for this project is being provided by the Company's Toronto manufacturing plant.

In spite of Britain's economic problems, Birtley U.K. enjoyed a satisfactory year. During a year of restricted National Coal Board activity caused by Britain's political and economic uncertainties, Birtley directed its coal processing and materials handling expertise towards markets in the U.S.A., Australia, Algeria, Spain, Turkey, Mexico, Eire, the Middle East and Persian Gulf and the European Common Market. Some significant engineering contract work was obtained. Of particular note is a major long term commitment for the design and engineering of materials handling systems for the El Hadja Steel Mill project in Algeria, which will be performed by our Glasgow office.

In the United Kingdom, Birtley Engineering of Chesterfield substantially completed the design, the engineering and supply and installation of the equipment at the Fryston coal wash plant. Birtley also undertook several coal plant modernization projects, installing more than 30 froth flotation units.

Birtley's materials handling expertise was called upon to design and supply the materials handling and dust precipitation equipment for the city of Sheffield's new incinerator plant which incorporates novel facilities for using refuse for district heating. Hot water from waste heat boilers will be pumped to apartments, heating some 2,300 dwellings.

With refuse dumping space fast running out and fuel generally in short supply, this method of heat recovery is welcomed by environmentalists and industry alike. The contract for a second similar plant at Birkenhead has now also been obtained.

In addition to its main engineering activity in the coal processing and bulk materials handling field, Birtley Engineering has two complimentary activities operated as separate divisions.

Firstly, the Birtley Spares and Plant Maintenance Division concerns itself with regular preventive maintenance of Coal Processing plants, Power Plants, Sewage Treatment plants, Steel Mills and Foundries and is responsible for the sale of consumable mechanical parts such as centrifuge baskets and general spares.

Humboldt solid bowl centrifuges are used extensively at sewage treatment plants to de-water sewage.

Birtley designs modern refuse plants which utilize heat from burning the refuse for central heating in apartment complexes. The plant shown above is at Sunderland and incorporates heavy duty vibratory equipment to separate the multiplicity of components in the waste material handled.

Under terms of a cooperation agreement with Kloeckner-Humboldt-Deutz AG of Cologne, Germany, this division is also responsible for the total plant work, installation and servicing (including spares) of all Humboldt solid bowl centrifuges, which are used extensively in sewage treatment and for Palla Mills for all of the United Kingdom. Three sewage treatment plants were commenced during the year.

Secondly, the Birtley Metallurgical and Chemical Division (Bimac) sells various reagents to improve the froth flotation of coal, to reduce its moisture contents and to aid pelletization. It also sells products which are designed to reduce capital expenditure in the coal, metallurgical and mineral processing industries. In this respect, Bimac's objectives are to employ new technologies to replace traditional capital intensive production and maintenance methods with inexpensive consumable chemicals and refractories.

The following four product groups sold by the Bimac Division are particularly significant.

1. THERMOCHEMISTRY PRODUCTS

This technology utilizes the heat generated during a carefully controlled chemical reaction, such as the burning of aluminum at high temperatures. Bitop M is a recent development. It is a high temperature moldable exothermic which can be fabricated into an isothermal mold (a mold which is self-fired to metal temperature prior to casting). Other product areas currently being investigated include self-firing, high temperature ceramics and refractories and materials which reduce thermal contractions and chemical potential stresses in welded structures.

2. HIGH TEMPERATURE EXO-INSULATION PRODUCTS

These products are low density composite materials consisting of fine refractory particles embedded in a matrix of high temperature ceramic fibre. The Bimin/Bimex product range provides customers with an insulating exothermic shape which is used to ensure maximum yield and optimum mechanical properties in ferrous castings and steel mill ingots. Insulating liners for tundishes, ladles and launders in steel mills and non-ferrous smelting operations are other applications for this product line. Bitop XP is a new insulating product for molten metal in furnaces, ladles and tundishes.

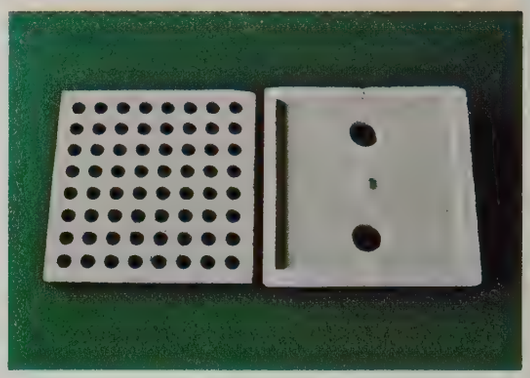
3. FLUXES AND METAL TREATMENT ADDITIVES

Metallurgical fluxes are designed to prevent a reaction occuring between molten metals and atmospheric gases, whereas metal treatment additives are designed to affect the structure and properties of the solidified cast metal.

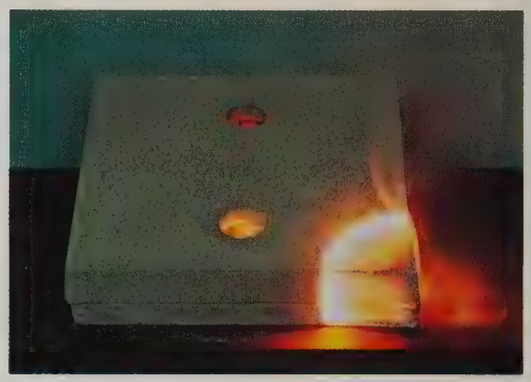
Bimac sells several Biflux products which are used to separate aluminum, copper or zinc metal from their oxide slags. Bislag 303 FS, is a ferrous metal slag coagulant. It fuses with the slag to facilitate its removal. Bislag 600 D increases metal fluidity and minimizes gas defects in ductile iron.

4. CERAMIC COATINGS FOR THE FOUNDRY INDUSTRY

Due to extreme temperature and pressure effects, molten metal streams tend to attack and erode the sand molds. Bimac materials are designed to minimize this problem. For example, Bikote SP is used for severe mold/core erosion conditions found in heavy section castings. This sintered ceramic parting agent prevents severe metal-mold reactions.



This isothermal mold is made from Bitop M and is used to produce aerospace castings.



Before use, the mold is closed and ignited. When fully ignited, internal temperatures will exceed 1500° C.

Steel foundries make test castings to evaluate the effectiveness of feeding materials. The feed pattern obtained with a Bimex sleeve (yellow) should be compared to that obtained with a less effective material (gray). Using a Bimex sleeve, the shrinkage cavity (white) is contained within the feeder head and does not penetrate the casting.

RESEARCH AND DEVELOPMENT

"To assure long term growth and prosperity, a continuing program directed towards new and improved products and technology is essential as well as the development of new and enlarged markets."

KENNETH G. HEFFEL,
President

Taskmaster®–Computerized Engineering Data

In last year's report a brief reference was made to our Taskmaster Computing Systems division.

Taskmaster is a new concept linking together numerous practical application programs into an efficient engineering data handling system. We view the Taskmaster concept and its ultimate implementation as being an important element of our overall corporate objectives.

In the future, practical and rational building systems will become more readily attainable as Taskmaster techniques are developed.

Taskmaster, located in Edmonton, Alberta, is directing its present efforts toward the completion of the automated computer-aided design, detailing, and production control aspects of our total joist production in North America.

Completion of this system, called JOISYS, will be effected by mid-year. We can already point to significant improvements in engineering efficiencies even before full implementation.

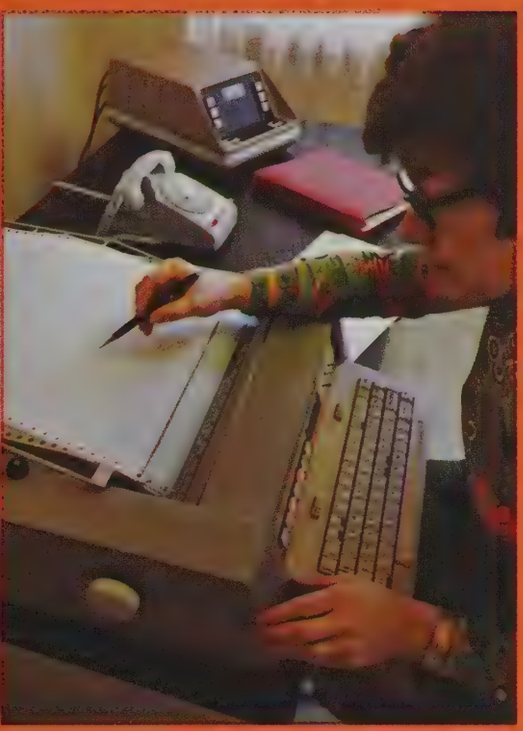
When the JOISYS program is completed, Taskmaster, in collaboration with various GWS engineering offices, will commence trial runs, evaluation and subsequent implementation of a computer-aided graphics system for the production of detail drawings for structural steel on high speed automated plotters. Work in this area has already begun and early indications are most promising.

Future development will concentrate on completion of structural engineering analysis and design systems again through the use of computer-aided methods. A good portion of this work is also well in hand.

Accordingly, by the end of 1974, we will have JOISYS, structural detailing, and structural analysis and design all linked together via the Taskmaster executive system which will perform a large portion of the engineering work of the steel manufacturing division.

These developments will not replace people, who will always remain the key to success. They will however, reduce the monotony of the every day engineering and technical work load, thereby freeing our people to devote more of their time to the optimization, best-choice, conceptual aspects of their work. This will lead to better utili-

This high speed automated plotter controlled by Taskmaster systems, produces steel detail drawings for direct shop manufacture.



zation of our engineering talents and efforts.

Extension of the basic engineering systems will provide control programs for inventory, purchasing and production personnel. Engineering and production work loads, plus inventory and material requirements will be known much earlier by these methods, making overall scheduling a more controllable matter. The total information flow will become faster and smoother.

We have only briefly described the internal usage of Taskmaster. The external considerations have not been overlooked. The marketing of such a service, or similar services, is also in the planning and development stage, but is scheduled for commencement only after all internal situations are complete.

Your Company has always followed the philosophy of directing corporate resources towards the development of highly engineered products or services related to the construction and natural resource industries with particular emphasis on those of a proprietary nature.

Taskmaster fits this philosophy. With increasing costs, and diminishing availability of trained experienced technical people, a service such as Taskmaster is extremely important.

Left: Terminals at our plants are linked to the central computer to transmit data and to return program output of the computerized joist design and engineering support systems.

Right: The development of automated and integrated analysis and design systems by computer aided methods is well underway.

Joist System Design

The research and development efforts in the joist product was directed toward the re-design of the cold formed top and bottom chords. Both Toronto and Fontana published new joist catalogues in 1973 incorporating all changes, including revised load tables and member properties.

Extensive research and testing was undertaken. The process of cold forming steel, under controlled conditions, enhances the strength of steel. The load carrying capacity is therefore increased resulting in light, strong members.

A range of seventeen chord sizes are produced in our Toronto and California plants. These were carefully chosen, after many trial designs to obtain best usage.

Additional factors, however, had to be accommodated. It is important that the configuration, or shape, of each chord profile, along with the gauge thickness of the material used, are both chosen to provide the maximum working of the chords for strength enhancement, while optimizing shop production efficiency by reducing the number of die changeovers on the forming lines.

Eventually an efficient range of chord sizes evolved. The process took time, since a change in one item affected all others. The final choice was made aided by the use of a specific computer program which provided optimization and micro refinements through iteration.

Research directed towards improving our joist system with respect to engineering, production and marketing is an ongoing project with heavy emphasis on finding novel uses for our basic product.

Above: This two-way joist and truss roof system was used on the Seaway Distribution Centre, Toronto. The trusses are manufactured from basic joist components and the columns from Hollow Structural Sections formed from strip. This is an effective method of overcoming heavy structural member shortages.

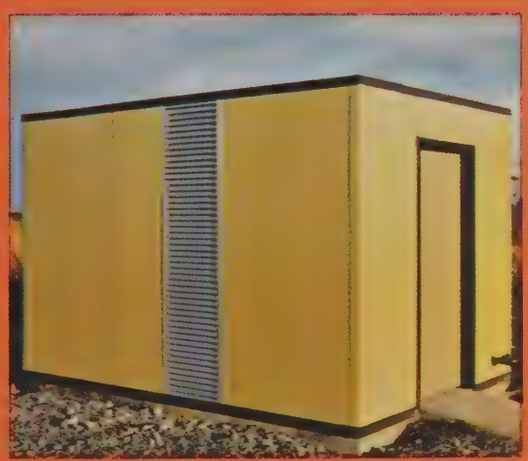
Right: Joist chords are pre-manufactured. Extensive research has produced an optimum chord design.

Wallclad Steel Sandwich Panels

Above: Wallclad explores new applications for its steel sandwich wall panels such as this experimental residence at Richmond, B.C.

Left: The light weight of Wallclad panels and its attractive appearance combine to provide a striking second storey for this brick building.

Below: Wallclad's standardized Uniplex buildings, now available in sizes up to 20′ x 42′ are in considerable demand at northern locations.



Wallclad products and systems required substantial research and development efforts. During 1973 a vigorous program was carried out, particularly in the latter part of the year.

Checking and retesting of all materials individually and in final assembled panel form was undertaken in our own premises and at outside testing agencies for verification. We are pleased to report that good results were obtained.

Structural stability of the panels under a variety of loading was confirmed. Uniform, and axial load, diaphragm and impact capacities were re-established. Individual component testing included anchors, screw-pull-out and epoxy adhesives as well as creep and shear reactions. Tests were also performed on thermal conductivity, water infiltration, flame-spread of core and assembled panel systems.

Running concurrently with the research and testing program on the development side we solved many of the production machinery problems. Furthermore, most of the "hardware" components (e.g. floor and head tracks, corner trim, sills etc.) were unified and simplified into common profiles, thereby leading to less expensive members and reduced inventory levels due to common usage.

More research work for further improvements in the product and system is continuing during 1974. One area of this work will be the investigation into fuller in-house manufacture of more of the components thereby assuring more efficient shop and man power utilization, reduction of expensive inventories, closer control and more secure supply at lower overall cost.

Flyash Brick and Tile

Since its beginning in 1970, most of International Brick and Tile's efforts consisted of industrially-oriented research and development based in turn on the more fundamental research carried out on flyash in the 1960's at the University of West Virginia's Coal Research Bureau. We expect that in the coming years a number of economic, social and technological trends will combine to create circumstances in which the desirability of flyash utilization in ceramics and other building materials and related products will increase to the point of becoming a necessity.

Work done to date in flyash ceramics will place us in a position of strong competitive advantage when the anticipated opportunities unfold in this field. In fact, the new tile plant now commencing production will reap the first significant commercial benefits because an extensive understanding of the materials characteristics and processes pertinent to flyash has already been acquired.

Although the firm's original activities were directed at proving the technical viability of brick manufacture, a shifting of emphasis took place in early 1973 with the full realization that floor-tile was potentially a much more profitable product. Simultaneous with construction of the tile plant, a program of developing and testing a number of basic body compositions was carried out. This resulted in a technically acceptable quarry tile body which is both amenable to commercial-scale manufacture and meets the various Federal standards including absorption and dimensional stability. In the latter part of the year, the emphasis of this program became focused on creation of special textures, colors, and glazes. In order to fully satisfy market demands for a complete product range, this is expected to become an ongoing activity.

Development of refractory products were also involved in 1973 activities. Like quarry tile, this product group has a rapidly growing demand met primarily by imported supplies and plays a key role in the growth of secondary industry in western Canada. A number of refractory compositions were formulated and produced in the laboratory during the year and tested under actual industrial conditions at a major Edmonton plant.

In order to attain full and continuous commercial utilization of the present pilot brick plant, some development work in 1973 was directed to identification of suitable new products for manufacture in this facility. These efforts will be continued in 1974.

With an eye to future expansion possibilities, our efforts were directed to the development and testing of new raw materials from new sources. Time and effort was also spent on formulation and test-pressing of body material suitable for manufacture of ceramic cavity block. Results were good, and testwork is to be resumed in 1974.

Above: Tests for moisture absorption are part of the continuing research program directed towards developing high quality quarry and paving tiles.

Right: I.B.T. is continuing its research into the utlization of flyash for the production of ceramic facing brick, refractory bricks, floor tiles and other related ceramic products.

Coal Processing

Birtley's involvement with iron and coal spans a period of more than 150 years. The secret of Birtley's success has always been a strong and continuing research and development program. Since the 1920's Birtley has been a leader in coal processing research and technology and has published a quarterly journal FUEL PREPARATION for many years.

Current research and development in the Birtley companies concerns itself with three major areas of activity.

Firstly, development directed towards improvement of existing processes with heavy emphasis on the application of computer techniques and process selection and design. For example, environmental problems associated with particulate emissions of flyash into the atmosphere are being studied in relation to coal washing. The degree of coal cleaning has some effect on emissions rates from coal fired power plants and also upon ash fusion properties.

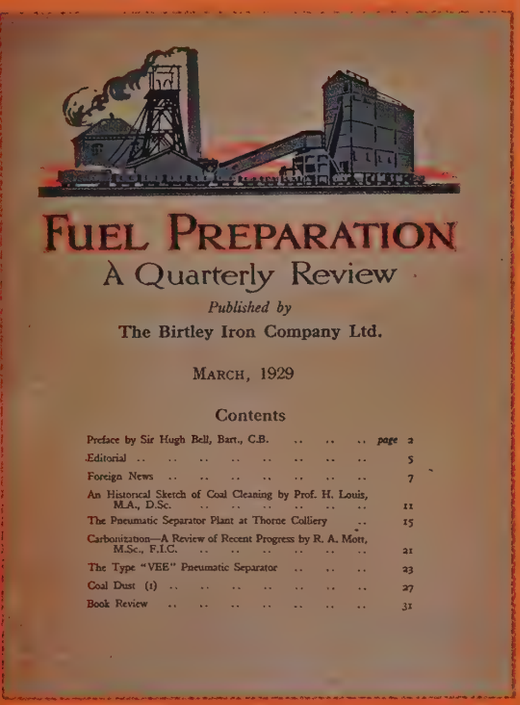
Another significant problem is encountered in the processing of low rank prairie coals for thermal markets, posed by the occurrence of bentonites in some coal seams. Birtley chemical technology is being applied towards effective removal and disposal of these materials. Bentonites also pose environmental problems in tarsand projects.

The second major area concerns itself with development work in new and improved processing equipment which is especially important to our activities in Europe, Australia and South America. This includes research into the viability of a dry centrifugal gravity separator which has resulted in a successful pilot scale testing plant for coals and minerals. Birtley was for many years one of the major contributors to the engineering and construction of pneumatic systems for the preparation of coal. The advent of water

Sedimentation rate tests on mineral slurries and froth flotation testing using laboratory cells are carried out regularly to determine process plant design parameters. The laboratory also provides assay and quality control services to Birtley's Metallurgical and Chemical Division (Bimac).

Above: Birtley research developed a simpler and more durable filter basket (blue) for the Birtley-Humboldt centrifuges.

Below: Birtley, a leader in coal processing research and technology, published this quarterly journal for many years. Pneumatic separation, much in vogue in the late 1920's, is once more gaining some importance, particularly in arid areas.



FUEL PREPARATION

A Quarterly Review

Published by

The Birtley Iron Company Ltd.

MARCH, 1929

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infusion dust suppression in coal mines ended the long and successful application of such plants.

The possibility of removing free dirt and high ash middlings from coal without adding water is a goal of great importance for the economic beneficiation of thermal coal. The Air Jig depicted has demonstrated the possibility of doing this in relatively small high capacity machines. Test and development work is proceeding. When fully developed, such techniques would afford the application of dry cleaning systems over a greater range of coals and would be of particular application in arid areas of the world or where water conservation is of primary importance.

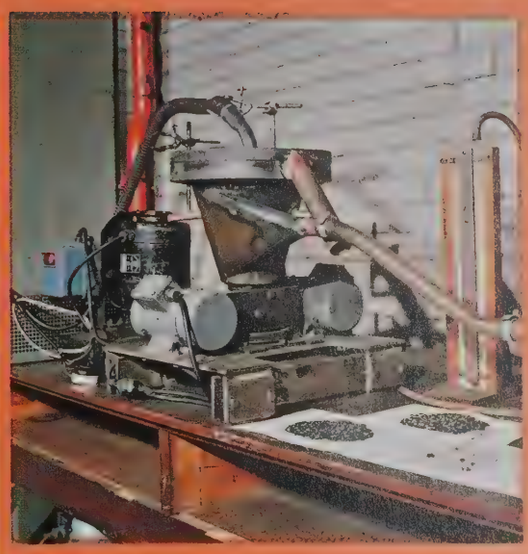
A small team of experienced specialist practical designers are continuously engaged in value engineering design reviews of our range of sampling equipment, screens, feeders, centrifuges, mineral processing and separating equipment for the development of more competitively priced and more efficient products.

This has led to the development of a method of utilizing a simpler, cheaper and more durable stainless steel filter material to produce replaceable baskets for Birtley's licensed range of high speed vibrating/dewatering centrifuges.

Apart from demands for development stimulated by field experience, Birtley is looking for new designs to strengthen its competitive ability.

The Birtley range of world wide patented sampling equipment has been extended by new patented designs of completely redesigned units and improvements to existing machines.

The third major area of research and development is caused by the fact that quite often a process objective can be attained by application of consumable materials in lieu of capital equipment.



This laboratory scale centrifugal air jig is the original unit on which the principle of high speed specific gravity pneumatic separation of minerals was proven. Raw feed is at the rear of the unit, reject material at the front right and concentrate at the front left.

Coal and Metallurgical Industry Consumables

The use of chemicals and chemical consumables in the coal and metallurgical industry can often be employed as alternatives to expensive process machinery. It has been found that many of the inherent difficulties associated with coal and mineral processing plants, now accepted as being part of the process, may be alleviated by the use of consumable chemical additives. Our research indicates that minor additions of chemicals can significantly change the physical processes associated with specific plant problems leading to:

a) novel filter aids for coal and mineral slurries;
b) new flocculating or dispersing agents for coal and mineral settling systems;
c) novel systems to reduce equipment wear and improve the efficiency of slurry pumping systems;
d) chemical compounds to improve suspension and flowability of dense media;
e) the search for possible materials to act as fluidizing agents for pulverized coal.

Metallurgical research in the field of thermochemistry explores the use of aluminothermic reaction to produce wear resistant coatings in mineral processing plants.

In the field of high temperature insulation, Bimac is developing non-toxic (free from both asbestos and silica) hot top boards for steel mill ingots and ferrous castings. This material also holds promise as an insulator for steel structures to delay warpage and collapse during fires and could be of major significance to the Company's steel joist product.

In the field of ceramic coatings, a research project has developed chemical additives which will selectively control the electrochemical reaction occurring at a metal-sand interface when it is subjected to high temperatures and pressures for long periods of time. Foundry trials are now underway.

The related areas of basic research are generally carried out by sponsored research programs at local universities in close liaison with Birtley scientists. The following activities are currently being pursued by either "in-house" test work or by University research teams.

1. Means of reducing operating costs in the coal and minerals industry by minimizing the rate of wear on process plant equipment due to pumping and circulation of abrasive slurries.
2. Briquetting and pelletization of fine coal for price up-grading and utilization of fines for gasification systems. These are especially important to some aspects of the economic viability of producing synthetic natural gas from coal.
3. High temperature filtration medium for purification of gaseous effluents.

Birtley Metallurgical and Chemical Division (Bimac) has a staff of qualified technologists. They are responsible for the ongoing research and development in fields such as thermochemistry, high temperature insulators, fluxes, metal treatment additives and ceramic coatings.

Consolidated Statement of Earnings and Retained Earnings

for the year ended December 31, 1973

EARNINGS	1973	1972
SALES	$46,856,915	$31,341,474
EARNINGS FROM OPERATIONS BEFORE DEDUCTING THE FOLLOWING CHARGES	$ 2,769,466	$ 2,306,675
Depreciation and amortization	425,464	360,788
Interest on long-term debt and amortization of debenture discount	836,084	618,072
Other interest	504,647	170,011
	1,766,195	1,148,871
EARNINGS BEFORE INCOME TAXES AND EXTRAORDINARY ITEM	1,003,271	1,157,804
INCOME TAXES		
Current	(61,479)	97,759
Deferred	531,427	371,708
	469,948	469,467
NET EARNINGS FOR THE YEAR BEFORE EXTRAORDINARY ITEM *(Note 10)*	533,323	688,337
Deferred costs written off *(Note 5)*	188,204	—
NET EARNINGS FOR THE YEAR *(Note 10)*	$ 345,119	$ 688,337

RETAINED EARNINGS	1973	1972
BALANCE — BEGINNING OF YEAR	$ 2,485,332	$ 2,334,362
Unamortized discount and issue costs of Series A Convertible Debentures	—	(97,114)
(Excess) of consideration paid over adjusted book value of acquisitions	—	(440,253)
	2,485,332	1,796,995
NET EARNINGS FOR THE YEAR	345,119	688,337
BALANCE — END OF YEAR	$ 2,830,451	$ 2,485,332

Consolidated Balance Sheet

as at December 31, 1973

ASSETS	1973	1972
CURRENT ASSETS		
Accounts receivable *(Note 8)*	$13,083,286	$ 9,826,089
Inventories *(Notes 2 and 8)*	9,200,328	7,142,854
Prepaid expenses	149,850	84,757
	22,433,464	17,053,700
EXPLORATION, TESTING AND DEVELOPMENT COSTS ON COAL PROPERTIES *(Note 3)*	215,805	92,427
FIXED ASSETS *(Notes 4 and 8)*	10,891,322	9,679,587
DEFERRED COSTS *(Note 5)*	1,189,526	294,037
UNAMORTIZED DEBENTURE DISCOUNT AND EXPENSES	324,171	341,655
	$35,054,288	$27,461,406
LIABILITIES		
CURRENT LIABILITIES		
Bank advances — Secured *(Note 6)*	$ 7,547,348	$ 2,247,004
Acounts payable and accrued liabilities	7,871,558	6,481,729
Income and other taxes payable	7,721	135,689
Current portion of long-term debt	1,073,137	904,390
Current liabilities exclusive of deferred income taxes	16,499,764	9,768,812
Deferred income taxes *(Note 7)*	1,485,268	1,312,886
	17,985,032	11,081,698
LONG-TERM DEBT *(Note 8)*	9,296,011	9,122,480
DEFERRED INCOME TAXES *(Note 7)*	867,831	696,933
MINORITY INTEREST	48,979	48,979
	28,197,853	20,950,090
SHAREHOLDERS' EQUITY		
CAPITAL STOCK *(Note 9)*	4,025,984	4,025,984
RETAINED EARNINGS	2,830,451	2,485,332
	6,856,435	6,511,316
	$35,054,288	$27,461,406

SIGNED ON BEHALF OF THE BOARD

Director

Director

Consolidated Statement of Source and Use of Working Capital

for the year ended December 31, 1973

SOURCE	1973	1972
Current operations	$ 1,170,477	$ 1,059,734
Long-term debt, net of debenture discount and issue expenses	1,068,531	7,196,963
Proceeds from sale of fixed assets	938,077	—
Issue of common shares, net of expenses	—	1,421,500
Long-term debt assumed on acquisition of subsidiary	—	280,000
Minority interest	—	48,979
	3,177,085	10,007,176
USE		
Capital expenditures on fixed assets	2,702,839	2,594,497
Deferred costs	979,438	294,037
Long-term debt retired	895,000	4,788,707
Exploration, testing and development costs on coal properties	123,378	92,427
Fixed asset additions resulting from acquisitions — net of deferred income taxes	—	811,776
Excess of consideration paid for subsidiaries over adjusted book values	—	440,253
	4,700,655	9,021,697
INCREASE (DECREASE) IN WORKING CAPITAL	(1,523,570)	985,479
WORKING CAPITAL — BEGINNING OF YEAR	5,972,002	4,986,523
WORKING CAPITAL — END OF YEAR	$ 4,448,432	$ 5,972,002

Notes to Consolidated Financial Statements

for the year ended December 31, 1973

1. SIGNIFICANT ACCOUNTING POLICIES AND PRINCIPLES

a) Principles of Consolidation

The consolidated financial statements include the accounts of all subsidiaries. The principal subsidiaries are wholly-owned except as indicated:

Atlas Construction & Crane Service Ltd.
Birtley Engineering Limited
Birtley Engineering (Canada) Ltd.
Birtley Engineering Inc.
Great West Steel Industries (Alta.) Ltd.
Great West Steel Industries (Sask.) Ltd.
Great West Steel Industries Inc.
International Brick & Tile Ltd. (60%)
Multiform Consultants Ltd.
Pine Pass Development Ltd.
Wallclad Products Ltd.

Operations of subsidiaries acquired during a year are included from the date of acquisition.

b) Non-Canadian Subsidiaries

The accounts of the United Kingdom subsidiary have been translated into Canadian currency at the rate of exchange in effect on December 31, 1973, except that fixed assets have been translated at the rate in effect at the date of acquisition and earnings at the average rate during the year. The accounts of United States subsidiaries have been converted to Canadian currency at par which approximates the rate of exchange prevailing since the dates of their incorporation.

c) Recording of Income

Profits on contracts are recorded on the basis of the company's estimates of percentage of completion on individual contracts, commencing when progress reaches a point where experience is sufficient to estimate final results with reasonable accuracy. That portion of the total contract revenue is accrued, which is allocable to contract expenditures incurred and work performed.

As contracts extend over one or more fiscal years, revisions in costs and profit estimates during the course of the work are reflected in the accounting period when the facts which require the revisions become known.

At the time a loss on a contract becomes known, the entire amount of the estimated ultimate loss is accrued.

d) Inventory Valuation

Raw materials and supplies are stated at the lower of cost and net realizable value. Work in progress represents costs and estimated earnings in excess of billings.

e) Depreciation

Depreciation is calculated at rates which will reduce the original cost of fixed asests to estimated residual values over the useful life of each asset on a straight line basis. All profits or losses resulting from the disposal of fixed assets are included in earnings when realized and the carrying value of such assets is removed from the accounts.

f) Deferred Costs

Post-acquisition research and development, pre-production and start-up costs of major new activities are recorded as deferred costs and are amortized over the lesser of five years from commencement of commercial production or utilization, or the estimated useful life of the activity.

g) Financing Costs

Costs of obtaining long-term debt financing are deferred and amortized over the term of the financing.

h) Income Taxes

The company accounts for income taxes on the tax allocation basis. Deferred income taxes are recorded when income taxes actually payable in respect of a year are reduced because of differences between the time certain items of revenue and expense are reported in the accounts and the time they are reported for income tax purposes. These timing differences relate primarily to holdback receivables, depreciation and deferred costs.

Potential tax savings resulting from the application of losses against future taxable income are not recognized until it becomes virtually certain that such tax credits will be earned within statutory time limits.

1. SIGNIFICANT ACCOUNTING POLICIES AND PRINCIPLES *(continued)*

i) Comparative Figures

Where applicable, comparative figures have been re-stated to conform with the presentation used in the current year.

2. INVENTORIES

	1973	1972
Raw materials and supplies	$5,813,263	$3,357,912
Work-in-progress	3,387,065	3,784,942
	$9,200,328	$7,142,854

3. EXPLORATION, TESTING AND DEVELOPMENT EXPENDITURES ON COAL PROPERTIES

The company's wholly-owned subsidiary, Pine Pass Development Ltd. holds a 60% interest in 104 coal licenses in western Canada under a farm-out agreement from Pan Ocean Oil Limited. The amount recorded represents exploration, testing and development expenditures to date. The annual exploration commitment is $100,000 until 1982 or commencement of commercial production whichever occurs first.

4. FIXED ASSETS

	1973			1972
	Cost	Accumulated Depreciation	Net Book Value	Net Book Value
Buildings	$ 4,690,268	$ 315,262	$ 4,375,006	$3,826,777
Machinery and equipment	7,883,917	1,921,827	5,962,090	4,630,459
	12,574,185	2,237,089	10,337,096	8,457,236
Land	554,226	—	554,226	1,222,351
	$13,128,411	$2,237,089	$10,891,322	$9,679,587

5. DEFERRED COSTS

	1973	1972
International Brick & Tile Ltd., Research and development of a patented process for the production of ceramic floor tiles from flyash, to be amortized over 5 years from commencement of commercial production.	$ 251,638	$ 98,295
Taskmaster Division, Computerized engineering data, consisting primarily of computer programming costs and related software to establish and implement the JOISYS design and detailing program, to be amortized over 5 years from commencement of commercial usage by location. The Toronto operation is now using the program and amortization has commenced.	252,412	76,123
Great West Steel Industries Inc., California, Establishment of manufacturing and marketing facilities in the western United States, consisting of marketing, pre-production and start-up costs (including depreciation of $29,353); to be amortized over 5 years. Amortization commenced when Fontana, California plant reached full commercial production on November 1, 1973.	685,476	58,443
Wallclad Products Ltd. (see below)	—	61,176
Total Deferred Costs, net of amortization of $22,773 (1972 – $NIL) and amounts written off	$1,189,526	$ 294,037

5. DEFERRED COSTS *(continued)*

During the year the company wrote off as an extraordinary charge against earnings deferred research and development and start-up costs of Wallclad in the amount of $188,204 (net of income tax saving available) when it became apparent that significant new research and development was required casting doubt on the long-term value of the original research and patent.

6. SECURITY FOR BANK ADVANCES

Bank advances are secured under the same instruments as the term bank loans referred to in Note 8 (a).

7. DEFERRED INCOME TAXES AND TAX CREDITS

	1973	1972
Deferred Income Taxes show separately the amounts arising principally from:		
Holdbacks receivable and other current timing differences	$1,485,268	$1,312,886
Capital cost allowances claimed in excess of depreciation recorded in the accounts	867,831	696,933
	$2,353,099	$2,009,819

The company's share of International Brick & Tile Ltd. pre-acquisition tax losses is $242,000. Great West Steel Industries Inc. tax losses amount to $153,000. No recognition has been given to the potential tax savings which may result from the application of these losses against future taxable income.

8. LONG TERM DEBT

	Original Principal	Outstanding 1973	Outstanding 1972
a) Term bank loan with interest at 1% to 1½% above prime bank rate secured by accounts receivable and inventories due March 31, 1975 and subject to further review at that time	$ 1,800,000	$ 1,800,000	$ 1,200,000
Term loans with interest at 2% above bank prime rates secured by accounts receivable, inventories, certain machinery and mortgage debentures on real property aggregating $2,500,000 repayable by 1977	6,415,039	2,339,824	2,779,390
Unsecured advances from minority shareholders in International Brick & Tile Ltd.	229,324	229,324	47,480
1972 Series 8½% Sinking Fund Debentures (see Note 8 (b) below)	6,000,000,	6,000,000	6,000,00
	$14,444,363	10,369,148	10,026,870
Less: Current Portion		1,073,137	904,390
		$ 9,296,011	$ 9,122,480

Payments required in the next five years to meet long-term debt instalments, including sinking fund payments, are:

1974	$1,073,137
1975	1,068,519
1976	478,168
1977	120,000
1978	150,000
TOTAL	$2,889,824

8. LONG TERM DEBT *(continued)*

b) Pursuant to a prospectus dated June 15, 1972, the company issued $6,000,000 8½% Sinking Fund Debentures, 1972 Series with share purchase warrants attached, maturing June 15, 1992. The trust indenture provides among other things, the following:

1) At the company's option, redemption for other than sinking fund purposes of any part of these debentures at a premium of 8% in 1974, decreasing by ½% per year to 1990.
2) Establishment of a sinking fund sufficient to retire $3,900,000 aggregate principal during the years 1974 through 1991.
3) A floating charge on all of the company's properties and assets both present and future as security for these debentures.

9. CAPITAL STOCK

Authorized — 2,500,000 common shares without nominal or par value with a maximum selling price of $10.00 per share.

	1973	1972
Issued and fully paid — 1,702,495 shares for a consideration of	$4,025,984	$4,025,984

At December 31, 1973 there were outstanding 315,000 common share purchase warrants entitling the holders to purchase common shares at a price of $8.50 per share on or before June 15, 1977 and thereafter at a price of $10.00 per share on or before June 15, 1982.

10. EARNINGS PER SHARE

The earnings per share figures are calculated using the weighted daily average number of shares outstanding during the year.

	1973	1972
Basic — before extraordinary item	31¢	40¢
— net earnings for the year	20¢	40¢

Fully diluted earnings per share figures have not been presented because the exercise of outstanding warrants and the inclusion of imputed interest would increase earnings per share.

11. REMUNERATION OF DIRECTORS AND SENIOR OFFICERS

Remuneration of directors and senior officers of the company amounted to $362,940 (1972 $295,913).

12. COMMITMENTS

During 1973, the company entered into lease agreements for several heavy mobile cranes. The leases are of 84 month duration. Annual instalments of $113,000 are required in each of the next five years.

Auditors' Report

TO THE SHAREHOLDERS OF GREAT WEST STEEL INDUSTRIES LTD.

We have examined the consolidated balance sheet of Great West Steel Industries Ltd. and its subsidiary companies as at December 31, 1973 and the consolidated statements of earnings and retained earnings and source and use of working capital for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion these consolidated financial statements present fairly the financial position of the companies as at December 31, 1973 and the results of their operations and the source and use of their working capital for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Vancouver, B.C.
March 1, 1974.

Chartered Accountants

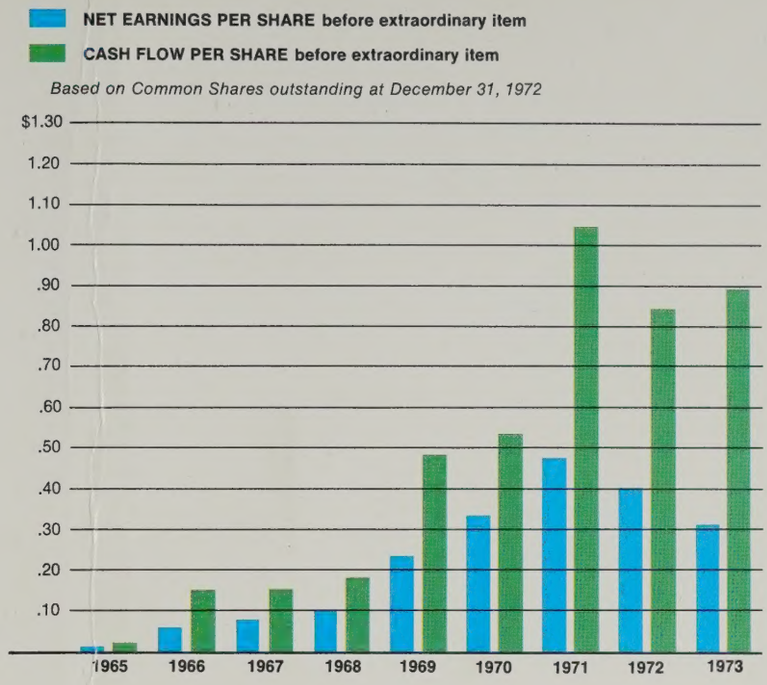
Historical Review

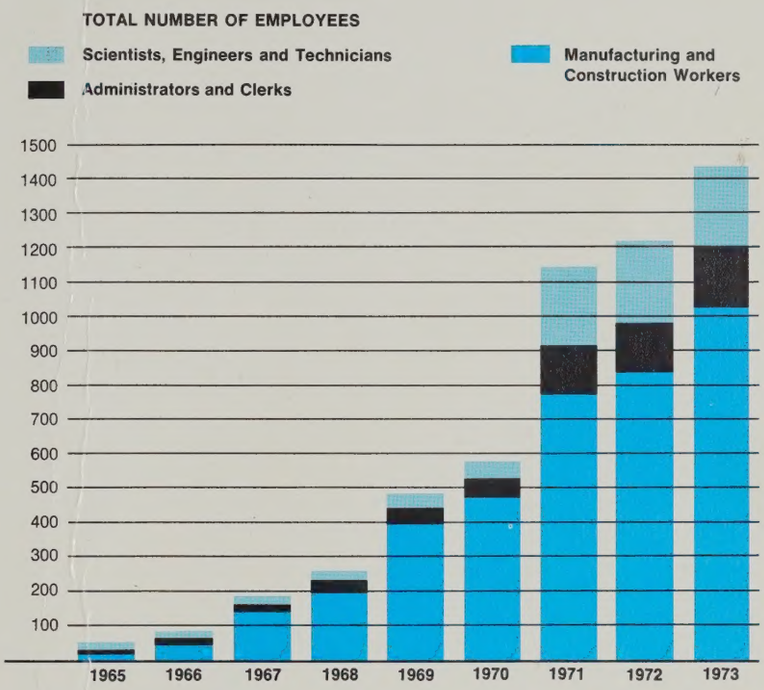
*In thousands of dollars except as indicated**

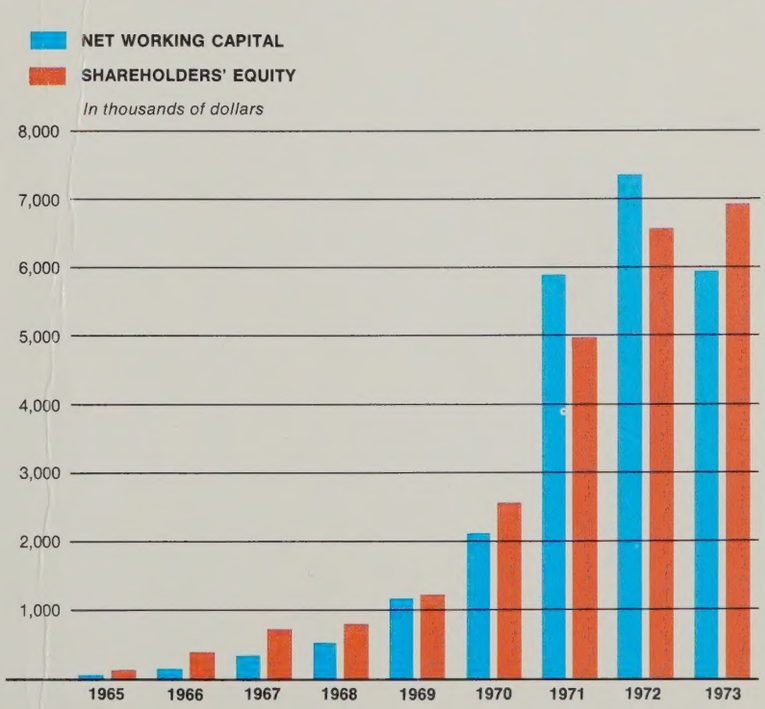
FINANCIAL POSITION AT YEAR END	1973	1972	1971	1970	1969
Net Working Capital†	$ 5,934	$ 7,285	$ 5,952	$ 2,118	$ 1,142
Net Fixed Assets	10,891	9,679	6,677	2,160	1,602
Other Assets	1,730	728	118	—	4
Funded Debt	9,296	9,122	6,084	947	1,065
Deferred Income Taxes	2,353	2,010	1,707	734	498
Minority Interest	49	49	—	—	—
Shareholders' Equity	6,857	6,511	4,956	2,597	1,186
CAPITAL EXPENDITURES	2,703	3,407	4,494	605	739
EMPLOYMENT					
Scientists, Engineers and Technicians*	231	224	221	45	37
Administrators and Clerks*	178	163	142	66	58
Manufacturing and Construction Workers*	1,022	831	779	482	400
Total Number of Employees*	1,431	1,218	1,142	593	495
Total Payroll and Benefits	16,220	11,169	7,169	5,161	3,016
INCOME AND RELATED DATA					
Sales	46,857	31,341	22,608	15,742	11,721
Earnings from Operations before deducting the following	2,769	2,307	2,286	1,487	942
Depreciation and Amortization	425	361	298	98	64
Interest on long-term debt	836	618	290	149	61
Other interest	505	170	184	138	64
Earnings before Income Taxes	1,003	1,158	1,514	1,102	753
Current Income Taxes	(61)	98	52	305	9
Deferred Income Taxes	531	372	671	231	352
Earnings for Year	533	688	791	566	392
Less: Extraordinary Item	188	—	—	—	—
Net Earnings	345	688	791	566	392
Earnings as % of Sales*					
Before Extraordinary Item	1.1%	2.2%	3.5%	3.6%	3.4%
After Extraordinary Item	.7%	2.2%	3.5%	3.6%	3.4%
Earnings per Share:**					
Before Extraordinary Item	31¢	40¢	47¢	33¢	23¢
After Extraordinary Item	20¢	40¢	47¢	33¢	23¢
Cash Flow per Share:**†					
Before Extraordinary Item	89¢	84¢	$1.04	53¢	48¢
After Extraordinary Item	68¢	84¢	$1.04	53¢	48¢

†*Including current portion of deferred income taxes.*
***Based on 1,702,495 Shares outstanding at Dec. 31, 1973.*

1968	1967	1966	1965
594	$ 387	$ 131	$ 40
,005	777	610	246
5	5	20	1
604	394	315	205
156	79	55	—
—	—	—	—
844	696	391	82
381	301	588	269
19	16	10	5
32	29	14	9
208	147	66	32
259	192	90	46
,830	1,343	591	209
,184	4,237	2,659	739
444	330	303	73
53	33	28	23
68	44	15	—
41	22	13	5
282	231	247	45
21	9	9	7
94	93	121	5
167	129	117	33
—	—	—	—
167	129	117	33
.7%	3.1%	4.3%	4.5%
.7%	3.1%	4.3%	4.5%
10¢	8¢	7¢	2¢
10¢	8¢	7¢	2¢
19¢	15¢	15¢	3¢
19¢	15¢	15¢	3¢







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